CLAIMS

1. A data transmission method in a digital cellular radio network, the method comprising the step of channel coding the information to be transferred for transmission, **characterized** in that the channel coding comprises

grouping bits to be transmitted in blocks having the minimum size of 288 bits,

carrying out convolutional coding for said blocks with a code rate of ½ by using GSM convolutional coding polynomes, and

puncturing the bits obtained by deleting bits from each block so that blocks containing no more than 456 bits will be obtained.

2. A method as claimed in claim 1, **characterized** in that the block size after the convolutional coding is 584 bits, and that the coded blocks obtained are punctured by deleting 128 bits from each block.

3. A data transmission method in a digital cellular radio network, the method comprising the step of channel coding the information to be transferred for transmission, **characterized** in that the channel coding comprises

grouping bits to be transmitted into blocks having the size of 290 bits,

inserting 4 tail bits to the blocks,

carrying out convolutional coding for said blocks with a ½ code rate by employing GSM convolutional polynomes so that after the coding the block size is 588 bits, and

puncturing the coded bits obtained by deleting 132 bits from each block.

4. A method as claimed in claim 1 or 3, **characterized** in that the information to be transmitted is transferred in the transfer system by generating one frame from two transcoding frames by using a part of synchronization and control bit positions of the latter frame in the information transfer.

5. A method as claimed in claim 1 or 3, **characterized** in that the information to be transmitted is transferred in the transfer system by generating a transcoding frame whose first two octets form a synchronization pattern that consists of zeros, said frame containing control bits and at least 288 bits of information to be transmitted.

6. A method as claimed in claim 5, **characterized** in that those bits of the frame that have a known value are used for synchronizing the transcoding frame.

7. A method as claimed in claim 5, **characterized** in that a short checksum is calculated for some of the data octets used for transferring the information to be transmitted, and that the CRC value thus obtained is transferred by using spare control bits, and that the CRC value is utilized in synchronizing the transcoding frame.

8. A method as claimed in claim 5, **characterized** in that the information to be transferred in modified so that the bit sequences comprised by the information differ from the synchronization sequences.

9. A method as claimed in claim 1 or 3, **characterized** in that each information bit is inverted prior to the transfer and deinverted after the transfer.

10. A method as claimed in claim 1 or 3, **characterized** in that the information to be transmitted is transferred in the transfer system by generating a transfer frame whose total length is 640 bits and the information transferred by which is applied to a channel coder as two blocks with the length of 290 bits.

11. A method as claimed in claim 10, **characterized** in that an identifier is inserted to both of the blocks that indicates whether the first or the second block of the frame is in question.

12. A method as claimed in claim 12, **characterized** in that the block identifier is in a predetermined position in the block, and that the identifier of the second block is formed by inverting the identifier of the first block.

13. A method as claimed in claim 12, **characterized** in that the first bits (1, 2, 3, 4) of both the frames are used for transferring supplementary information over the air interface.

14. A method as claimed in claim 13, **characterized** in that the supplementary information bits are used for signalling discontinuous transmission.

15. A method as claimed in claim 13, **characterized** in that the supplementary information bits are used for transmission of synchronization information.

16. A method as claimed in claim 14, **characterized** in that the bit indicating discontinuous transmission in the first block of the frame is replaced at the base station by a fixed-value bit prior to channel coding, and that the bit to be transmitted in the same position in the latter frame has an inverse value.

17. A method as claimed in claim 4, **characterized** in that the transfer frame is generated at a network interworking unit (1000).

18. A method as claimed in claim 17, **characterized** in that the transfer frame comprises a radio link protocol frame.